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ABSTRACTS

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yielded different generic and specific taxa which are mainly encountered in top of Safa Formation. The specimens are identified, illustrated and described, however, the well preserved fauna are serially sectioned by using grinding apparatus. Each serial section was drawn by using camera lucida attached to a binocular microscope in order to investigate their internal morphology. The fossils are also compared with those which have affinities with them from other localities. The study has revealed the presence of 17 species belonging to 11 genera (Striithyris Muir-Wood, Sphaeriodothyris Buckman, Somalithyris Muir-Wood, Pleuraloma? Cooper, Arabicella Cooper, Apatecosia Cooper, Arapsopleurum Cooper, Dissoria Cooper, Bihenithyris Muir-Wood, Somalitela Muir-Wood and Ectyphoria? Cooper). These are recorded here for the first time. Among them there are 6 new species. Surprisingly is that the analysis of the internal morphology of specimens which belong here to genus Pleuralma? show similarity to the internal features of genus Karadagithyris Tchorszhevsky (1974). Moreover, the specimens superficially resemble to genus Pleuraloma Cooper and differ from it in internal character. The author thus believes that all the members of Pleuraloma? from northern Sinai are homeomorphic to Pleuraloma Cooper and probably belong to a new genus of subfamily Karadagithyrididae Tchorszhevsky. More study is needed in order to emphasize their systematic position.

SESSION 10: STRATIGRAPHY AND GENERAL GEOLOGY

Chairmen: Geol. S. Wasfi
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10.1 ON THE GENESIS OF DURICRUST: REVIEW AND ASSESSMENT

By

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Near-surface sediments in southern Kuwait show extensive development of duricrust in the form of calcrete, silcrete, dolocrete and gypcrete. Genesis of duricrust is the final product of three integrated factors: availability of source material, mechanism of source material translocation; and favourable conditions under which source material could be precipitated. Mixing between the first two factors is very common in the literature. For comprehensive assessment of duricrust genesis, all the three factors should be considered.

10.2 ORGANIC AND INORGANIC FABRIC OF PALEOKARST SEDIMENTS, EAST OF BANI SUEF, NILE VALLEY, EGYPT

By

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The area east of Bani Suef represents an excellent example of karst landforms resulting from paleokarstification processes, that affected the Middle and Upper Eocene sequence exposed along the Nile Valley.

Detailed studies on the paleokarst profiles and associated sediments revealed well defined organic and inorganic fabrics in the different horizons of the profile.

The upper horizon of the profile, consisting of calcrete duricrust mixed with terra-rossa, is characterized by mega- and microscopic fabrics represented by: red matrix breccia, diagenetic crystallization rhythmites, pisolitic, geopetal, successive crustified banded, isolated glaeboles, rhizocretions and nodules.

The middle illuvial horizon which includes the "Egyptian Alabaster" is dominated by cave fills, calcite cemented collapse breccia fragments and residual red soil, reflecting different fabrics: cockade, lichen stromatolitic, microstalactitic (gravitational), rhizolithes (root molds and casts and alveolar), oscillating ripples, cave pearls, drip water stalactites, drip impact water stalagmites and columns.

The parent rocks of the lower horizon are highly fractured, brecciated, recrystallized and rotten, where the commercially known "Bucchino" is well developed. These rocks exhibit floating and clotted fabrics with characteristic concentric diffusion patterns of iron sesquioxides.

Genetically, these fabrics are the result of organic (algal, bacterial and phytogenic) and/or inorganic (physico-chemical) factors through rhythmic crystallization differentiation, predominating the pedogenetic processes. These were developed in the vadose, vadose/phreatic and phreatic subaerial and cave environments.

It is possible to use these textures as guides for recognizing and identifying paleo-erosion cycles and their related surfaces. They are also useful to throw light on the genetic model and paragenesis of the karst related economic deposits.

10.3 CHERT ASSOCIATED WITH PHOSPHORITES IN THE UPPER CRETACEOUS DUWI FORMATION, RED SEA COAST, EGYPT

By

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Phosphate deposits are widely distributed in many places in Egypt. Large occurrences are present accompanying organic-rich lithologies of variable compositions. The phosphorities in the Quseir-Safaga area are associated with more or less dolomitic or siliceous limestones, dolomites, cherts, marls and clays. The phosphates are rich in marine organisms, including: foraminifers, dinoflagellates, diatoms, radiolaria, fish-debris, etc.

The close association of cherts (and porcelanites) and phosphorites in many sedimentary rock sequences in the world (such as in the Middle Miocene Monterey Formation of California, USA) indicates that both lithologies have similar, but not precisely the same marine geochemical cycles and quite similar depositional environment; although, phosphorites are usually shallower water deposits than cherts.

Chert and porcelanite occur in the Duwi Formation as thin beds, nodules and lenticular bodies. Chert nodules are spherical or subspherical to oblate and vary in size from 5 to about 50 cm. They are in some cases elongated with their long axis parallel to the bedding planes or may occur in thin continuous layers. Chert lithologies in this area include black homogenous and spheroidal chalcedonic cherts, silicified phosphorites, and interbedded, broken-bedded and brecciated brown cherts. Compositionally, chert and porcelanite lithologies are composed of microcrystalline to cryptocrystalline quartz. Other notable constituents within these rocks include phosphatic